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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,195	10/31/2001	Blaine D. Gaither	10017481 -1	5798

7590 01/03/2006

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER
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ELMORE, REBA I

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/004,195

Applicant(s)

GAITHER ET AL.

Examiner

Reba I. Elmore

Art Unit

2189

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on papers filed September 14, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-8 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

1. Claims 1-8 are presented for examination.
2. In view of the arguments filed on September 14, 2005, PROSECUTION IS HEREBY REOPENED. A *non-final rejection* based on prior art is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

### ***SPECIFICATION***

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***DOUBLE PATENTING***

4. The rejection of obvious-type double patenting over copending application 10/001586 is *withdrawn* as this application was abandoned.

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5. The rejection of obvious-type double patenting over patent 6,813,691 is *withdrawn* due to Applicant's remarks.

***35 USC § 102***

6. The rejection of claims 1, 3-4 and 7-8 as being anticipated by Talyansky et al. is *withdrawn* due to Applicant's remarks. The following new rejection is given.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. Claims 1-2, 4 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Lamparter.

9. Lamparter teaches the invention (claim 1) as claimed including a method of improving performance of a computer system, the system comprising:

- a. specifying a time period as one of the attributes of the cache objects (e.g., see col. 4, lines 19-25);
- b. evicting, from a cache memory, at least one entry that has remained unchanged for at least the time period as the time period in which the cache object was last accessed or a time period set for when the cache object expires and is then removed (e.g., see col. 4, lines 19-43);
- c. measuring at least one performance parameter as a weight measure for adjusting cache control parameters of a cache (e.g., see col. 5, lines 12-28);

- d. changing the value of the time period as being able to adjust the time intervals to a faster rate (e.g., see col. 6, lines 40-45);
- e. repeating steps (b) and (c) as the iterations used in the optimizing method (e.g., see col. 5, line 29 to col. 6, line 39); and,
- f. determining whether the performance parameter has changed as determining whether or not to adjust a particular parameter based upon the application of a range of optimization approaches which change the control parameters of the cache for improving the cache performance (e.g., see col. 5, line 29 to col. 6, line 39).

As to claim 4, Lamparter teaches evicting, from a cache memory, at least one modified entry that has remained unchanged for at least the time period as a normal cache replacement policy. The reference teaches adjusting parameters for determining efficient cache line replacement which includes writing back updated or modified entries to main memory.

As to claim 7, Lamparter teaches repeating any and all the method steps to optimize a performance parameter (e.g., see col. 5, line 29 to col. 6, line 39).

As to claim 8, Lamparter teaches repeating any and all method steps until the performance parameter changes (e.g., see col. 5, line 29 to col. 6, line 39).

***35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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11. Claims 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamparter.

12. The details of the independent claim are taught as shown above in the rejection based on anticipation using the same reference.

13. As to claim 2, Lamparter does not specifically teach measuring the rate of cache-to-cache transfers, however, the reference does discuss the capability of adjusting a variety of parameters relating to cache performance including hit rate. It would have been obvious to one of ordinary skill in the cache art at the time the invention was made to use the method taught by Lamparter to measure the rate of cache-to-cache transfers because this is a common, known parameter and would be included in a cache system's hit rate in systems having multiple processors and multiple caches. The reference specifically states the method is applicable to a wide variety of systems. Measuring this parameter would be well known in light of the reference.

As to claims 5 and 6, Lamparter teaches evicting, from a cache memory, at least one entry that has remained unchanged for at least the time period as evicting objects based on time since the object was placed in the cache with evicting an unmodified object having preference over a modified object as this is normal, preferred cache usage (e.g., see col. 4, lines 7-43). Modified objects which remain unchanged for a set time period are also evicted using a given replacement policy. The replacement policy treats all cache objects as having the same weight regardless of where the object was obtained, i.e., system memory, another cache or elsewhere on a network.

***ALLOWABLE SUBJECT MATTER***

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14. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The reference does not teach or show measuring how many evicted entries are accessed during a predetermined time span. This limitation is not considered either anticipated or obvious over Lamparter.

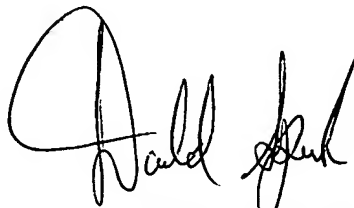
### ***CONCLUSION***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reba I. Elmore, whose telephone number is (571) 272-4192. The examiner can normally be reached on M-TH from 7:30am to 6:00pm, EST.

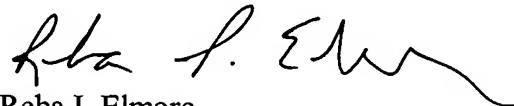
If attempts to reach the examiner by telephone are unsuccessful, the art unit supervisor for AU 2187, Donald Sparks, can be reached for general questions concerning this application at (571) 272-4201. Additionally, the official fax phone number for the art unit is (703) 746-7239.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center central telephone number is (571) 272-2100.

December 11, 2005



**DONALD SPARKS**  
**SUPERVISORY PATENT EXAMINER**



**Reba I. Elmore**  
**Primary Patent Examiner**  
**Art Unit 2187**

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